Listing of Claims

1. (Currently Amended) A method of preventing chronic rejection of a transplant in a recipient comprising:

   (a) administering to the recipient ~~a~~ an anti-CD3 immunotoxin, thereby reducing the recipient's T-cell population; and

   (b) administering to the recipient a costimulation blocker, thereby reducing a transplant-specific antibody response.

2. (Original) The method of claim 1, wherein the transplant is allogeneic.

3. (Original) The method of claim 1, wherein the recipient is a mammal.

4. (Original) The method of claim 3, wherein the mammal is a primate.

5. (Original) The method of claim 4, wherein the primate is a human.

6. (Original) The method of claim1, wherein the immunotoxin transiently reduces the subject's T cells in the blood and lymph nodes by at least one log unit.

7. (Currently amended) The method of claim 1, wherein the immunotoxin is a divalent ~~anti-T cell~~ immunotoxin ~~directed at theCD3 epitope~~.

8. (Currently Amended) The method of claim 7, wherein the divalent ~~anti-T cell~~ immunotoxin comprises a toxin moiety and a targeting moiety directed to the T cell CD3ε epitope.

9. (Original) The method of claim 8, wherein the toxin moiety is a diphtheria toxin.

10. (Currently Amended) The method of claim 9, wherein the divalent ~~anti-T cell~~ immunotoxin is UCHT1-CRM9.

11. (Original) The method of claim 1, wherein the transplant is derived from a living donor.

12. (Original) The method of claim 1, wherein the transplant is derived from a cadaveric donor.

13. (Original) The method of claim1, wherein the transplant is selected from the group consisting of kidney, liver, heart, pancreas, lung, and skin transplants.

14. (Original) The method of claim 1, wherein the costimulation blocker blocks the CD40: CD154 pathway.

15. (Original) The method of claim 14, wherein the blocker of the CD40: CD154 pathway is an anti-CD154.

16. (Original) The method of claim 15, wherein the anti-CD154 is 5C8.

17. (Original) The method of claim 14, further comprising administering a second costimulation blocker, thereby further reducing the transplant-specific antibody response.

18. (Original) The method of claim 17, wherein the second costimulation blocker blocks the B7: CD28 pathway.

19. (Original) The method of claim 18, wherein the blocker of the B7: CD28 pathway binds to B7 and blocks bindingof B7 with CD28.

20. (Original) The method of claim 19, wherein the blocker of the B7: CD28 pathway is CTLA 4-Ig.

21. (Original) The method of claim 1, wherein the costimulation blocker blocks the B7: CD28 pathway.

22. (Original) The method of claim 21, wherein the blocker of the B7: CD28 pathway is CTLA4-Ig.

23. (Original) The method of claim 1, wherein the immunotoxin is administered at least three times.

24. (Original) The method of claim 23, wherein the immunotoxin is administered at least on the day of transplanting and on two days immediately following transplanting.

25. (Original) The method of claim1, wherein the costimulation blocker is administered at least once.

26. (Original) The method of claim 25, wherein the costimulation blocker is administered at least on the day of transplanting and on three additional days within the first week following transplanting.

27. (Original) The method of claim 1, further comprising administering an immunosuppressive agent to the recipient.

28. (Original) The method of claim 27, wherein the immunosuppressive agent is selected from the group consisting of cyclosporine, mycophenolate moefitil, tacrolimus, azathioprine, and steroid and any combination thereof.

29. (Original) A method of reversing a late acute rejection of an transplant by a recipient having a transplant that has survived for a prolonged period of time using the method of claim 1, comprising:

(a) monitoring the recipient for an indicator of a late acute rejection; and

(b) administering to the recipient showing the indicator of the late acute rejection an immunotoxin, thereby reducing the recipient's T-cell population.

30. (Original) The method of claim 29, wherein the transplant is selected from the group consisting of kidney, liver, heart, pancreas, lung, and skin transplants.

31. (Original) The method of claim 30, wherein the indicator of the acute rejection response of the kidney transplant is elevated serum creatinine.

32. (Original) The method of claim30, wherein the indicator of the acute rejection response of the kidney transplant is a histologic indicator.

33. (Original) The method of claim 32, wherein the histologic indicator is tubulitis.